

28. (previously presented) An integrated circuit having a field-plated resistor the field-plated resistor comprising:
- a. a resistor body formed in a semiconductor substrate, the resistor body having first and second contact regions,
 - b. a first insulating layer on the resistor body, the first insulating layer approximately coextensive with the resistor body and having a top surface and a bottom surface,
 - c. a contact window in the first insulating layer and extending from the top surface of the first insulating layer through the first insulating layer to the resistor body,
 - d. a field plate on the first insulating layer and approximately coextensive therewith and with the resistor body, the field plate having a top surface and a bottom surface, with a portion of the bottom surface extending through the contact window in the first insulating layer and into contact with the first contact region of the resistor,
 - e. a second insulating layer, with a first portion of the second insulating layer at least substantially covering the field plate,
 - f. an electrical contact to the top surface of the field plate,
 - g. an electrical contact to the second contact region of the resistor, and electrically insulated from the field plate, and
 - h. a plurality of metal conductors formed on the first portion of the second insulating layer.

29. (previously presented) The integrated circuit of claim 28 wherein the field plate comprises polysilicon.

30. (previously presented) The integrated circuit of claim 29 wherein the first and second insulating layers are SiO₂.

31. (canceled)

32. (previously presented) The integrated circuit of claim 29 further comprising an insulative spacer formed around the field plate.

33. (previously presented) The integrated circuit of claim 29 wherein the electrical contact to the top surface of the field plate comprises a barrier layer.

34. (previously presented) The integrated circuit of claim 33 wherein the electrical contact to the second contact region of the resistor comprises a barrier layer.

35. (previously presented) An integrated circuit having a field-plated resistor the field-plated resistor comprising:

- a. a resistor body formed in a semiconductor substrate, the resistor body having first and second contact regions,

- b. a first insulating layer on the resistor body, the first insulating layer approximately coextensive with the resistor body and having a top surface and a bottom surface,
- c. a contact window in the first insulating layer and extending from the top surface of the first insulating layer through the first insulating layer to the resistor body,
- d. a field plate on the first insulating layer and approximately coextensive therewith and with the resistor body, the field plate having a top surface and a bottom surface, with a portion of the bottom surface extending through the contact window in the first insulating layer and into contact with the first contact region of the resistor,
- e. a second insulating layer, with a first portion of the second insulating layer at least substantially covering the field plate,
- f. a metal layer comprising
 - i. an electrical contact to the top surface of the field plate,
 - ii. an electrical contact to the second contact region of the resistor, and electrically insulated from the field plate, and
 - iii. a plurality of metal conductors formed on the first portion of the second insulating layer.

36. (previously presented) A method for the manufacture of an integrated circuit having a field-plated resistor the field-plated resistor comprising:

- a. forming a resistor body in a semiconductor substrate, the resistor body having first and second contact regions,
- b. a first insulating layer on the resistor body, the first insulating layer approximately coextensive with the resistor body and having a top surface and a bottom surface,
- c. forming a contact window in the first insulating layer and extending from the top surface of the first insulating layer through the first insulating layer to the resistor body,
- d. forming a field plate on the first insulating layer and approximately coextensive therewith and with the resistor body, the field plate having a top surface and a bottom surface, with a portion of the bottom surface extending through the contact window in the first insulating layer and into contact with the first contact region of the resistor,
- e. depositing a second insulating layer, with a first portion of the second insulating layer at least substantially covering the field plate,
- f. depositing a metal layer,
- g. patterning the metal layer to form

- i. an electrical contact to the top surface of the field plate,
- ii. an electrical contact to the second contact region of the resistor, and electrically insulated from the field plate, and
- iii. a plurality of metal conductors formed on the first portion of the second insulating layer.

37. (previously presented) The method of claim 36 wherein the field plate comprises polysilicon.

38. (previously presented) The method of claim 37 wherein the first and second insulating layers are SiO_2 .

39. (previously presented) The method of claim 38 further including the step of forming an insulative spacer formed around the field plate.

40. (new) The method of claim 28 wherein the electrical contact to the top surface of the field plate overlies the portion of the bottom surface of the field plate that extends through the contact window in the first insulating layer and into contact with the first contact region of the resistor.

41. (new) The method of claim 35 wherein the electrical contact to the top surface of the field plate overlies the portion of the bottom surface of the field plate that extends through the contact window in the first insulating layer and into contact with the first contact region of the resistor.

42. (new) The method of claim 36 wherein the electrical contact to the top surface of the field plate overlies the portion of the bottom surface of the field plate that extends through the contact window in the first insulating layer and into contact with the first contact region of the resistor.